

**REMARKS**

Claims 1-18 are currently pending in this application and have been examined on the merits. Claims 1, 14 and 15 have been amended hereinabove, no new matter has been added. Support for amended claim 1 can be found in the specification at paragraphs [0007], [0011] – [0016], and in Examples 1-13. Support for amended claim 14 can be found in the specification at paragraphs [0013]. Support for amended claim 15 can be found in the specification at paragraphs [0014], [0015], and in Tables after paragraphs [0028], [0029], [0030] and [0031].

Claims 1-18 are rejected under 35 U.S.C. §§ 112, 102(b), and 103(a). Applicants have considered the rejections at length but respectfully disagree. In view of the current amendments and the arguments laid out below, Applicants submit that claims 1-18 fully comply with the requirements of 35 USC § 112 and the claimed subject matter is not anticipated or rendered obvious by the cited references. Favorable reconsideration and allowance of the claims are earnestly solicited.

**Rejection under 35 USC § 112 – Indefiniteness**

Claim 15 is rejected under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner alleged that “the ester cannot be both an ester of citric acid and a butyl ester.” (Office Action, at p. 2). Applicants respectfully disagree. Paragraph [0007] of the specification discloses a “water-insoluble ester of a polycarboxylic acid with a monohydric alcohol having at least 4 carbon atoms,” whereas paragraph [0015] specifically discloses that the ester can be “tributyl citrate and acetyl tributyl citrate,” which are formed between citric acid and butyl alcohol.

However, solely to expedite prosecution and not for any reason related to patentability, Applicants have amended claim 15 to depend upon claim 8. Support for amended claim 15 can be found in the specification at paragraphs [0014], [0015], and in Tables after paragraphs [0028], [0029], [0030] and [0031]. The 35 USC § 112 is now moot and should be withdrawn.

#### **Rejection under 35 USC § 102(b) – Anticipation**

Claims 1-17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Iwase (JP 2002121452, Machine English translation and English translation of abstract) (hereinafter “Iwase”). The Examiner alleged that “Iwase teaches an offset printing ink where the solvent is made of a diester compound of a dibasic acid (such as azelaic acid, for example (0016)) with an alcohol such as 1,3-pentanediol (0013-0017),” and that “Inherently a polycarboxylic acid will have at least 2 carboxylic acid groups.” (Office Action, at p. 2). Applicants respectfully disagree. The reaction suggested by the Examiner between a dibasic acid and a diol would result in poly-esters (polymer), which are different from the polycarboxylic acid as claimed in the present invention.

However, solely to expedite prosecution and not for any reason related to patentability, Applicants have amended claim 1 to recite “the solvent comprises at least one water-insoluble ester of a *polycarboxylic acid having more than 2 carboxylic acid groups* with a *monohydric alcohol* having at least 4 carbon atoms.” Applicants submit that Iwase does not disclose the particular water-insoluble ester as claimed.

Accordingly, Iwase does not anticipate the pending claims. Withdrawal of the rejection under 35 U.S.C. § 102(b) is respectfully requested.

#### **Rejection under 35 USC § 103(a) – Obviousness**

Claims 8, 14, and 16-18 are rejected under 35 U.S.C. § 103(a) as being rendered obvious by Iwase in view of U.S. Patent No. 6,284,720 to Opre (hereinafter “Opre”). Claims 9-11 are

rejected under 35 U.S.C. § 103(a) as being rendered obvious by Iwase in view of U.S. Patent No. 6,932,465 to Nito et al. (hereinafter “Nito”). Claims 12-13 are rejected under 35 U.S.C. § 103(a) as being rendered obvious by Iwase in view of U.S. Patent Pub. No. 2004/002840 to Arnaud et al. (hereinafter “Arnaud”). Claim 15 is rejected under 35 U.S.C. § 103(a) as being rendered obvious by Iwase in view of U.S. Patent No. 3,665,060 to Bergomi et al. (hereinafter “Bergomi”). Claims 16-18 are rejected under 35 U.S.C. § 103(a) as being rendered obvious by Iwase in view of U.S. Patent No. 2,389,781 to Isenberg (hereinafter “Isenberg”). Applicants respectfully disagree.

As a preliminary matter, neither Iwase nor Opre, Nito, Arnaud, Bergomi, or Isenberg teaches “an offset printing ink or varnish wherein the solvent comprises at least one water-insoluble ester of *a polycarboxylic acid having more than 2 carboxylic acid groups with a monohydric alcohol* having at least 4 carbon atoms.”

The Examiner alleged that “Opre teaches a biodegradable solvent where an organic co-solvent is an ester of citric acid (a polycarboxylic acid with 3 carboxylic acid groups) (col. 2, lines 63-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the citric acid of Opre with the composition of Iwase because Opre teaches the environmental benefits of a biodegradable solvent. . . . Opre teaches the use of coconut oil as the ester in the ester based solvent (col. 3, lines 53-61).” (Office Action, at p. 3). However, “environmental benefits of a biodegradable solvent” has nothing to do with the characteristics – e.g., low odor and low migration – of the offset printing ink or varnish as disclosed in the present invention.

The Examiner further alleged that “Nito teaches the use of trimellitic acid as part of the buffer in a reaction solution to be used with ink when printing (col. 1, lines 9-14; col. 5, lines 11-22). It would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the trimellitic acid of Nito with the composition of Iwase because Iwase teaches that control of the pH helps image quality (col. 3, lines 29-35).” (Office Action, at p. 4). However, trimellitic acid is not an ester of trimellitic acid as claimed in the present invention.

The Examiner further alleged that “Arnaud teaches the production of a cosmetic such as a gloss with tridecyl trimellitate as the ester in the oil used in the cosmetic (0061-0070). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the ester of Arnaud with the composition of Iwase because Arnaud teaches a high gloss, non-sticky composition that is safe for human contact. Further the oil used in Arnaud is a solvent.” (Office Action, at p. 4). However, “a high gloss, non-sticky composition that is safe for human contact” also has nothing to do with the characteristics – *e.g.*, low odor and low migration – of the offset printing ink or varnish as disclosed in the present invention.

The Examiner further alleged that “Bergomi teaches the use of a butyl ester in an adhesive or binder in a pigment coating composition where the butyl ester is an ester of a polycarboxylic acid (maleic acid) and produces a secondary butyl ester (Examples 6 and 7). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the ester of Bergomi with the composition of Iwase because Bergomi teaches that the composition is particularly useful in pigment coating compositions for paper and paperboard (col. 1, lines 5-14; Example 7).” (Office Action, at pp. 4-5). However, a maleic acid has only two carboxylic acid groups, the same as acids disclosed in Iwase, and “pigment coating compositions for paper and paperboard” also has nothing to do with the characteristics – *e.g.*, low odor and low migration – of the offset printing ink or varnish as disclosed in the present invention.

The Examiner further alleged that “Isenberg teaches the use of coconut oil in a luminescent coating material (col. 4, line 56-col. 5, line 9). The coconut oil can be used with the

ester as part of the vehicle of the pigment (col. 4, lines 36-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the coconut oil of Isenberg with the composition of Iwase because Isenberg teaches that coconut oil causes luminescence of the pigment for use in a paint (col. 1, lines 7-16).” (Office Action, at p. 5). However, “luminescence of the pigment for use in a paint” also has nothing to do with the characteristics – e.g., low odor and low migration – of the offset printing ink or varnish as disclosed in the present invention.

For a rejection of obviousness, a reasonable expectation of success in combining the teaching of references is *required*. See MPEP 2143.02; *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727, 82 USPQ2d 1385, 1395 (2007); *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 1207-08, 18 USPQ2d 1016, 1022-23 (Fed. Cir. 1991). Applicants respectfully submit that a person of ordinary skill in the art would not have a reasonable expectation of success in combining the teaching of Iwase and Opre, Nito, Arnaud, Bergomi or Isenberg to reach the present invention as claimed.

Accordingly, Iwase, in view of Opre, Nito, Arnaud, Bergomi, or Isenberg, does not render the pending claims obvious. Withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

### **Conclusion**

For these reasons, Applicants submit that their invention is fully compliant with the requirements of 35 U.S.C § 112 and are not anticipated or rendered obvious by the cited references, thus the rejections are improper and should be withdrawn. Favorable reconsideration is respectfully requested. Accordingly, Applicants submit that all of the pending claims are now in condition for allowance and issuance of a Notice to that effect is respectfully requested.

No extra fee is believed to be due for the filing of this Amendment and Response to Office Action. However, the Director is hereby authorized to charge all fees due, and credit any overpayments, to Deposit Account No. 50-0540.

Respectfully submitted,

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